

nancies. Mr. Arthur Campbell contributes some early information derived from the same inquiry, this time on "socio-economic differences". Six aspects are discussed, namely religion, education, income, husband's occupation, wife's occupation and place of residence. The direction of the differences is indicated but there are not many details of their magnitude. Fuller particulars of the inquiry have been published in the book *Family Planning, Sterility and Population Growth*, by Freedman, Whelpton and Campbell.*

Three articles are concerned in some degree with another recent sample inquiry in the United States—the "Study of the Future Fertility of Two-child Families"—which is still current and has already received some attention in the pages of the REVIEW. Mr. Robert Potter refers to contraceptive practice and birth intervals; Mr. Charles Westoff discusses religion and fertility; and Mr. Philip Sagi makes a component analysis of birth intervals. The first of these articles is concerned with rates of "failure" among users of contraceptives and shows how unwanted births vary according to duration of marriage, order of birth and religion of the married couple. Some difficulties in the statistical analysis are described. The second paper investigates the association of fertility not only with the simple statement of "religion" but with such matters as frequency of church attendance, religious education and manner of performance of the wedding ceremony; such factors are found to be of some significance. Mr. Sagi analyses birth intervals between an "intended component" and a "residual component" and finds that each contributes about one-half to the variability of the birth interval.

Finally there is a contribution by Dr. Warren Nelson on the present state of research in the biological control of fertility. He describes two compounds, Enovid and Norlutin, which inhibit the secretion of certain essential hormones, as representing a "real breakthrough . . . although . . . we will find much better methods in the future". His conclusion is, however, that a great deal more remains to be learnt about fundamental mechanisms before research can lead to

fully effective practical applications.

All the papers in this volume have been given some individual attention in this review. Their exceptional interest as an indicator of current views and activities justifies such a full treatment.

P. R. C.

Freedman, Ronald, Whelpton, Pascall K. and Campbell, Arthur A. *Family Planning, Sterility and Population Growth*. New York and London, 1959. McGraw-Hill. Pp. xi + 515. Price 74s.

THIS IS AN interesting and important book. It describes a survey in 1955 of the actual fertility, and the expected fertility, of American white married women aged eighteen to thirty-nine. The survey was based on a random sample of 2,713 wives living with their husbands or temporarily separated because of the husband's service in the Armed Forces, and was 91 per cent complete. The findings of the survey may be considered under the following main headings: Sterilization, Contraception, Estimated family size, Total family size, Cohort fertility, and Socio-economic factors affecting fertility.

Nine per cent of the sample were found to have had some sort of gynaecological operation which made them sterile. This proportion is surprisingly high. The interviewers were not medically trained, but many of the operations were contraceptive and not therapeutic in intent.

The use of contraceptive technique is widespread, 93 per cent of "fecund" wives have used such techniques, and another 3 per cent intend to do so in the future. Among Roman Catholics the rhythm method is the most widely used technique, a large majority of the remainder use condoms or diaphragms. Some 30 per cent of all Catholic wives and 57 per cent of those practising contraception have used methods other than the rhythm method.

There have been significant changes in recent years in the number of children that wives expect to have when they have completed their families. More are expecting three and four child families, fewer are expecting families of two or more than four children. For the most recent cohorts 1926-30, the expected number of two, three and four child families are about

* This book is reviewed below.

equal and each about 28 per cent of the whole. Only 6 per cent expect a one child family and only 10 per cent five or more child families.

The modal ideal size of family has shifted from two in a survey made in 1941, to three in a survey made in 1945, to four in the present survey. In the present survey 41 per cent selected four as the ideal family size and another 32 per cent selected three, only 19 per cent chose two, and only 8 per cent five or more.

Cohort fertility is only near completion for the oldest group of wives, but the fertility of the later cohorts may, the authors think, be fairly reliably estimated from the wives' answers on the number of future children they think they will be having. From this it appears that average family size having reached, in the United States, a nadir of 2.4 for women born 1906-1915, will rise thereafter and reach 2.7 for the wives born from 1916-1920, 3.0 for the wives born in 1921-1925, and 3.2 for the most recent group born in 1931-1937. The 1921-1925 are likely to achieve an average family size last reached by the 1891-1895 cohort, but the distribution of family size will be very different, with the current group having fewer one child and fewer large families. The authors are confident that the wives' estimate of their future fertility gives a fairly accurate picture of what it will actually be. The under-estimates and over-estimates will they think just about balance. The one group which is probably consistently over-estimating the number of children they will have are young Roman Catholic wives, particularly those who are college-educated.

Finally the socio-economic factors affecting fertility are fully considered. Differences in fertility are most marked by wives' educational status and these are of special interest to eugenicists. As the authors say: "The significance of educational differences in fertility lies not only in their possible dysgenic consequences, however, but also in the kinds of environment for child growth provided by people of different educational background." It is encouraging, therefore, that this survey indicates that fertility differences by educational status seem to be disappearing. The actual average number of births in 1955 by educational status and the percentage,

in brackets, of each group were: College, 1.8 (15 per cent), High School four years, 1.8 (46 per cent), High School one to three years, 2.1 (25 per cent), Grade School only 2.9 (14 per cent). The estimated final average family sizes are: 2.9, 2.9, 3.0 and 3.6 respectively. If these estimates are correct then it would appear that the only wives, classed by education, who will have an especially high fertility are those who have had no secondary education, and they are only one in seven of the total. Taking the most recent cohorts there are indications that differences in fertility may disappear altogether. Among the wives married 0-six years at the time of the interview, the College educated anticipate 3.2 children and the Grade School educated only 2.7 children. The actual performance may differ from the wives' expectations; but the basis is now laid for a complete reversal of the customary negative relationship between education and fertility. Fertility differences by husband's occupation or by husband's income show a less marked differential and similar trends.

C. O. C.

Eversley, D. E. C. *Social Theories of Fertility and the Malthusian Debate*. Oxford, 1959. Clarendon Press: Oxford University Press. Pp. ix + 313. Price 35s.

THIS IS A work of history and appraisal. The ideas men have entertained about population have been many and various, and some of them have their roots deep in antiquity and in prejudice and superstition. Many of the theories mentioned were untested by the scientific collection of factual information, and indeed the author himself is not particularly concerned with facts. "One looks instead for intelligent and consistent explanations of observed phenomena, for internally consistent hypotheses, and for a statement of remaining gaps and uncertainties which so far prevent prediction."

Mr. Eversley writes well and is skilful in analysing population philosophies and finding gaps and flaws in the arguments of theorists. He takes Malthus as his central figure and considers other writers to the extent that they are his precursors and successors, adherents and critics. Most of the text deals with the period up